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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SMITH, CREIGHTON H

ART UNIT	PAPER NUMBER
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2645

DATE MAILED: 07/06/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

3

Office Action Summary

Application No.

942373

Applicant(s)

BICK, A. R.

Examiner

Smith, C.H.

Group Art Unit

2645

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-33 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☐ Claim(s) _____ is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 5,6
- ☒ Notice of References Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Art Unit: 2645

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 26, 28-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Vance et al.

Vance et al disclose a keypad for a cell phone having a plurality of keys. Each key on the keypad acts as switch because when the user depresses a certain key the number corresponding to the key which is depressed is sent to a transmitter for transmission. Depressing the keys actuates or switches that key into a transmit mode. Vance also discloses the use of a capacitive sensor, col. 1, lines 60-65, which provides a second type of input, i.e., when the users hand is near the sensor it will light up the keys. Regarding claim 30, see col. 1, line 51. Also, in claim 33, "impedance" is misspelled.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2645

Claims 2, 4, 8-11, 14, 17-21, 27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Vance et al in view of Gerpheide et al '731.

Gerpheide et al show a keypad (Fig. 2) having a keymat (22) and a capacitive resistance touchpad (20) that is disposed beneath the keys of the keymat, making the touchpad/capacitive sensor disposed adjacent to the keymat. To have provided Gerpheide's teaching of disposing the sensor adjacent to the keypad would have been obvious to a person having ordinary skill in the art. Gerpheide et al show in Fig. 3 2 sensing plates (30,36) with electrodes 32 arranged on top of the sheets in non-contiguous strips

Claims 6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vance et al in view of Nishi.

Nishi discloses a key pad that is made of silicone rubber, col. 1, lines 60-65 and which has a hard coat, col. 4, line 15 on top of the silicone rubber. To have provided Nishi's teaching of using silicone rubber keys with a hard coating on top of the keys on Vance's key would have been obvious to a person having ordinary skill in the art because the key pad could be composed of any multitude of materials and Nishi has found that silicone rubber with a hard coating is a preferred type.

Claim 12, 15, 22-25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Vance et al in view of Gerpheide et al as applied to claim 10 above, and further in view of Schmiz et al.

Schmiz et al disclose a switch element using a transparent electrode layer, [0013]. To have similarly used Schmiz's transparent electrode layer in Gerpheide's sensing plate would have been obvious to a person having ordinary skill in the art.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vance et al in view of Gerpheide et al as applied to claim 10 above, and further in view of Maeda et al.

Maeda et al discloses the use of transparent electrodes (111, 211) that are made of indium tin oxide, [0057] & [0081]. Also, Maeda shows in Fig. 14 the different environments in which the indium tin oxide electrodes could be used. Two such uses are in a cell phone and on the keypad of a PC, both which have a touch key, [0149]. To have provided Maeda's indium tin oxide electrodes in Gerpheide's key pad would have been obvious to a person having ordinary skill in the art because both references teach the use of electrodes underneath the outer face of a key pad and to switch one electrode for another would be within the view of the skilled artisan.

Claim 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vance et al in view of Gerpheides et al as applied to claim 9 above, and further in view of Hayashi et al.

Hayashi et al discloses the use of a polyethylene terephthalate (PET) as a base layer [0134], and also discloses the use of indium tin oxide (ITO) as a transparent electrode. In section [0280] Hayashi et al disclose that in Fig. 20A, base 402 is made of PET and has on its surface an ITO electrode 403. Hayashi shows in Fig. 27B that their PET and ITO electrodes are to be used in a key pad (484). To have provided

Art Unit: 2645

Hayashi et al PET substrate with an transparent ITO electrode in place of Gerpheides et al sensing plate (36) would have been obvious to a person having ordinary skill in the art because of the fact that both sensing plates are being used in a keypad to transmit electrical signals from a key's depression on the top of the keypad.

Any inquiry concerning this communication should be directed to Creighton h Smith at telephone number 308-2488.

24 June '04

A handwritten signature in black ink, reading "Creighton h Smith". The signature is written in a cursive, flowing style with a large, prominent "S" at the end.

Creighton h Smith
Primary Examiner
Art Unit 2645